

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Kil Jae Chang
Serial No. :
Filed :
For : VENDING MACHINE FOR DISPENSING ITEMS IN
SMALL BOXES

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SIR:

In keeping with the duty of candor and good faith owed to the U.S. Patent and Trademark Office, applicant wishes to make of record the items on attached PTO Form 1449.

U.S. Pat. No. 690,068 to Mills discloses a vending machine having at least one coin-actuated rotatable dispensing mechanism C and a vertical commodity receptacle I2 holding vertical columns of small boxes or packages of product, such as gum and matches, and being drivingly coupled to the rotatable dispensing mechanism C by shafts and gears D, H such that rotation of a handle of the rotatable dispensing mechanism C causes rotation of the receptacle I2 past a fixed stop J1 which engages a lowermost package in one column and allows it to drop into a common discharge chute J2. A pivotal stop K mounted at a vertical side of the machine in response to detecting when the receptacle I2 is empty will extend into the receptacle so as to prevent its further rotation.

U.S. Pat. No. 844,843 to Anthony discloses a vending machine having a casing B fixed on a base A and rotatably mounting thereabove a turntable 4 by a fixed central stud 6 extending upwardly through a floorplate 3 of the casing and a series of antifriction balls 8 contained in a ring 9 on a floorplate 3 of the casing B below the turntable 4. The machine also has a circular series of vertically-disposed magazines C disposed on the turntable 4 about the periphery thereof and adapted to contain stacks of

articles therein, such as boxes or packages of matches. Each magazine C is a piece of sheet metal bent to form a back wall 10 and two side walls 11 with inwardly turned lips or flanges 12 on their front edges, with the rear, as well as flanges 12 on the side walls 11 adjacent the turntable 4, being cut away to permit ejection of a lowermost box from the magazine C. The machine also has a clockwork mechanism 15 on a plate 14 fixed to the top of the fixed stud 6 and surrounded by the magazines C and has a spring 42 which is first wound up by rotating the turntable 4 and will unwind to rotate the turntable 4. A pusher operated by the mechanism 15 is movably mounted in a groove on the top of the plate 14 and is reciprocally movable to eject articles from one of the magazines into a chute 17 on the casing B. A series of arms 43, corresponding in number to the magazines C are pivotally mounted to the underside of the turntable 4 so as to extend directly beneath the magazines C. Each arm 43 has a free end with an upwardly projecting stud 44 which is normally held inwardly by a flat spring 46 between the arm and a peripheral flange 47 on the turntable 4. On the floorplate 3 below the path of the pusher within one of the magazine C is a stud 48 which constitutes a stop against which the free end of one arm 43 abuts, when the magazine C is in position for operation of the pusher to eject boxes, thereby temporarily locking the turntable 4 from further rotating. Once a particular magazine C no longer contains a box and the pusher is retracted, a dog 50 on the pusher will disengage the one arm 43 from the stop 48 and allow the turntable to revolve incrementally to bring another magazine C filled with boxes into the path of the pusher. Thus, the turntable 4 is intermittently revolved until all of the magazines C are emptied.

U.S. Pat. No. 1,072,758 to Miller discloses a vending machine having a casing, a shaft 6 rotatably journaled across the lower portion of the casing, a plurality of removable magazines 13 mounted in the casing and in spaced relationship above the shaft 6, a delivery drum 24 mounted upon the shaft 6 below the magazines 13 for undergoing rotation with the shaft 6 relative to the magazines

13 and having adjustable delivery pockets 25, 26 therein open at the outer cylindrical surface of the drum and adapted to register with the magazines for receiving packaged product therefrom and upon rotation of the drum to deliver the product to a lower discharge opening 7, and locking pawls mounted upon the casing and adapted to prevent rotation of the drum between operations.

U.S. Pat. No. 1,084,563 to Schroeder discloses a vending machine having a casing A, a stationary frame B supported in the casing A and having an opening B2 through a side thereof, a shelf beneath the opening in the frame B upon which each successive article to be vended is temporarily deposited, a bottomless rotatable carrier C mounted upon a central spindle supported in the frame B and having a plurality of vertically arranged compartments with stacks of articles therein and adapted when the carrier C is rotated to pass over the opening in the frame B, a ratchet on the spindle, an ejecting mechanism secured to the frame B in proximity to the opening B2 and cooperating with the ratchet, a lever operating the ejecting mechanism to simultaneously move the carrier a partial revolution and eject an article deposited on the shelf, and an element for locking the ejecting mechanism against operation.

U.S. Pat. No. 1,426,844 to Wood discloses an article display and delivering cabinet.

U.S. Pat. No. 1,546,077 to Hunter et al. discloses a vending machine having a magazine 25 adapted to accommodate small packets, such as packets of cigarettes or other vendable items, with a front vertical slot to afford a view of the packets, a partition 27 supporting the magazine 25 and having an opening therethrough, a dispensing drum 29 disposed below the magazine and the opening of the partition 27 and having diametrically opposed packet recesses 30, 31 formed in the periphery of the drum 29 such that the drum travels through one-half revolution at a time so that one packet can be dropped through the partition opening into one recess 30 while another packet is dispensed or dropped from the other recess 31 into a discharge chute 33.

U.S. Pat. No. 1,697,510 to Morin discloses a vending machine

having a magazine rotatable on a vertical axis and provided with a plurality of circularly equidistantly spaced channels to contain packages to be vended, a stationary bottom plate provided with an aperture to receive packages supplied from the lower ends of the channels, and a delivery plate connected to the magazine and rotatable therewith and provide with delivery openings equal in number to the channels and disposed circularly out of vertical alignment therewith. The delivery plate is adapted to support the stacks of packages in the channels as they pass over the aperture.

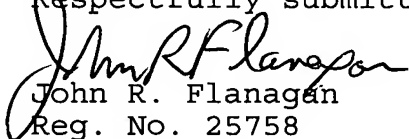
U.S. Pat. No. 2,772,811 to Schaef discloses a vending machine having globe 23 containing a plurality of articles stored in transparent capsules C, a dispensing wheel 40 having a plurality of peripheral slots for receiving the capsules C from the globe 23, a base rotatably supporting the wheel 40 and stationarily supporting the globe 23 above the wheel 40 and having dispensing opening 65 over which the wheel 40 passes, and a curved wall 110 in the globe 23 above the opening in the base preventing admission of all capsules directly from the globe through the opening of the base except the one capsule in the slot of the wheel 40 being aligned with the opening.

U.S. Pat. No. 3,036,732 to Schaef discloses a vending machine having a rotatable cylindrical storage member 24 with radial slots 38 holding pens and a rotatable dispensing member 25 disposed below the storage member 24 and having pairs of diametrically opposed notches 46 alignable with the radial slots for receiving a pen therefrom. Rotation of the dispensing member 25 by turning a handle 18 causes the pen to be carried from beneath the storage member 24 and to drop out of the recesses into a chute 62 where the pen can be removed by an operator.

U.S. Pat. No. 4,109,825 to Weitzman discloses a vending machine having a magazine with radially projecting rectangular item holding compartments 74, a magazine bottom cover plate 62 disposed below the lower open ends of the compartments 74 of the magazine and having a single rectangular opening 64, a discharge housing 40 spaced below the magazine bottom cover plate 62 and having a top

dispensing opening 56 at a location offset from the opening 64 of the magazine bottom cover plate 62 and leading to a bottom dispensing chute 60, a rotatable carrying plate 42 disposed between the magazine bottom cover plate 62 and the discharge housing 40 and having a plurality of rectangular openings 54 each being capable of being brought into alignment at separate angular positions of the rotation of the carrying plate with the opening 64 of the cover plate 62 and the opening 56 of the discharge housing 40 so that an item can drop from one compartment through the opening 64 of the cover plate 62 into one of the openings 54 of the carrying plate 42 and then carried by the carrying plate 42 away from under the opening 64 of the cover plate 62 into alignment with the opening 56 of the discharge housing 40, and a coin operated handle 38 for rotating the carrying plate 42.

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U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

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SERIAL NO.

LIST OF PRIOR ART CITED BY APPLICANT

(Use several sheets if necessary)

APPLICANT

KIL JAE CHANG

FILING DATE

GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	690068	12/1901	MILLS			
	844843	2/1907	ANTHONY			
	1072758	9/1913	MILLER			
	1084563	1/1914	SCHROEDER			
	1426844	8/1922	WOOD			
	1546077	7/1925	HUNTER ET AL			
	1697510	1/1929	MORIN			
	2772811	12/1956	SCHAEF	221	155	
	3036732	5/1962	SCHAEF	221	113	
	4109825	8/1978	WEITZMAN	221	14	

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.